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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,745	12/20/2001	Gordon Geisbuesch	81907DMW	3795

7590

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EXAMINER

WORKU, NEGUSSIE

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/027,745

Applicant(s)

GEISBUESCH, GORDON

Examiner

Negussie Worku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/20/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman et al. (USP 5,045,932), in view of Juen (USP 5,341,220).

With respect to claim 1, Sharman et al. discloses a line clocking arrangement (sensor clock generator 42 of fig 2) used in a scanner for synchronizing the line readout of a clocked imaging device (color image sensor 28 of fig 2) with the motion of an object (film 12 of fig 1, moves from a supply reel 16 of fig 1) being scanned, see (col.3, lines 30-35); said imaging device (imaging device 28 of fig 1-4), including a photosensitive area, (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), at least one horizontal output register (48a, 48b—of fig 2, see col.4, lines 23-30), a drain gate interposed between the photosensitive area (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), and one or more transfer gates interposed between the photosensitive area (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), and the horizontal output register (48a, 48b—of fig 2, see col.4, lines 23-30), for transferring charge between the photosensitive area and the

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horizontal output register, see col.4, lines 23-30); said arrangement comprising: an encoder (sensor 32 of fig 1) for sensing movement of the object being scanned and generating a sync signal in correspondence with a movement of the object (film 12 of fig 1); and a timing generation circuit (clock generator circuit 42 of fig 1) for generating clock signals for controlling the clocked imaging device, (image sensor 28 of fig 1), said clock signals including a drain clock signal for controlling the dumping of charge, and an output clock signal for clocking image charge through the horizontal output register, see (col.4, lines 23-30), wherein the timing generation circuit (42 of fig 2) receives the sync signal and times the duration of the drain clock signal and the beginning of the output clock signal to the occurrence of the sync signal, see (col.3, lines 60-68) whereby the line readout time is dynamically adjusted to changes in velocity of the scanned object during a period when charge is being dumped, see (col.7, lines 5-10).

Sharman et al. does not teach or disclose an imaging device having an overflow drain.

Juen in the same area of imaging device having an improved exposure control and reduction apparatus teaches an imaging device (as shown in fig 1 and 2), having an overflow drain (a photometry (OFD) amplifier 4 of fig 1, for measuring a photo current flowing into an overflow drain a CCD imaging device, see abstract)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of Sharman to include: an imaging device having an overflow drain.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Sharman by the teaching of Juen for the purpose of controlling a proper exposure for obtaining a perfect final image, of all the prints of different color to be exactly superimpose, as discussed in col.2, lines 20-30, of Juen.

With respect to claim 2, Sharman et al. discloses the arrangement (as shown in fig 1-4) wherein the beginning of the output clock signal is delayed to accommodate a slower velocity in the movement of the scanned object (the movement of film 12 of fig 1, see col.7, lines 5-10).

With respect to claim 3, Sharman et al. discloses the arrangement (as shown in fig 1-4) wherein the duration of the drain clock signal (clock signal is generated by sensor 42 of fig 1) is extended to accommodate a slower velocity in the movement of the scanned object, (the movement of film 12 of fig 1, see col.7, lines 5-10).

With respect to claim 4, Sharman et al. discloses the arrangement (as shown in fig 1-4), wherein the object to be scanned is a photographic film (film 12, to be scanned by image sensor 28 as shown in fig 1).

With respect to claim 5, Sharman et al. discloses the arrangement (as shown in fig 1-4), wherein the clocked imaging device is a tri-linear CCD imaging device (CCD image sensor 28 (R, G, B) of fig 2, see col.3, lines 45-50).

With respect to claim 6, Sharman et al. discloses a line clocking arrangement (sensor clock generator 42 of fig 2) used in a scanner for synchronizing the line readout of a clocked imaging device (color image sensor 28 of fig 2) with the motion of an object (film 12 of fig 1, moves from a supply reel 16 of fig 1) being scanned, see (col.3, lines 30-35); said imaging device (imaging device 28 of fig 1-4), including a photosensitive area, (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), at least one horizontal output register (48a, 48b—of fig 2, see col.4, lines 23-30), a drain gate interposed between the photosensitive area (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), and one or more transfer gates interposed between the photosensitive area (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), and the horizontal output register (48a, 48b—of fig 2, see col.4, lines 23-30), for transferring charge between the photosensitive area and the horizontal output register, see col.4, lines 23-30); said arrangement comprising: an encoder (sensor 32 of fig 1) for sensing movement of the object being scanned and generating a sync signal in correspondence with a movement of the object (film 12 of fig 1); and a timing generation circuit (clock generator circuit 42 of fig 1) for generating clock signals for controlling the clocked imaging device, (image sensor 28 of fig 1), said clock signals including a drain clock signal for controlling the dumping of charge, and an output clock signal for clocking image charge through the horizontal output register, see (col.4, lines 23-30), wherein the timing generation circuit (42 of fig 2) receives the sync signal and times the duration of the drain clock signal and the beginning of the output clock signal to the occurrence of the sync signal, see (col.3, lines 60-68) whereby the

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line readout time is dynamically adjusted to changes in velocity of the scanned object during a period when charge is being dumped, see (col.7, lines 5-10).

Sharman et al. does not teach or disclose an imaging device having an overflow drain.

Juen in the same area of imaging device having an improved exposure control and reduction apparatus teaches an imaging device (as shown in fig 1 and 2), having an overflow drain (a photometry (OFD) amplifier 4 of fig 1, for measuring a photo current flowing into an overflow drain a CCD imaging device, see abstract)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of Sharman to include: an imaging device having an overflow drain.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Sharman by the teaching of Juen for the purpose of controlling a proper exposure for obtaining a perfect final image, of all the prints of different color to be exactly superimpose, as discussed in col.2, lines 20-30, of Juen.

With respect to claim 7, Sharman et al. discloses the arrangement (as shown in fig 1-4) wherein the beginning of the output clock signal is delayed to accommodate a slower velocity in the movement of the scanned object (the movement of film 12 of fig 1, see col.7, lines 5-10).

With respect to claim 8, Sharman et al. discloses the arrangement (as shown in fig

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1-4) wherein the duration of the drain clock signal (clock signal is generated by sensor 42 of fig 1) is extended to accommodate a slower velocity in the movement of the scanned object, (the movement of film 12 of fig 1, see col.7, lines 5-10).

With respect to claim 9, Sharman et al. discloses the arrangement (as shown in fig 1-4), wherein the object to be scanned is a photographic film (film 12, to be scanned by image sensor 28 as shown in fig 1).

With respect to claim 10, Sharman et al. discloses the arrangement (as shown in fig 1-4), wherein the clocked imaging device is a tri-linear CCD imaging device (CCD image sensor 28 (R, G, B) of fig 2, see col.3, lines 45-50).

With respect to claim 11, Sharman et al. discloses a method synchronizing the line readout of a clocked imaging device (color image sensor 28 of fig 2) with the motion of an object (film 12 of fig 1, moves from a supply reel 16 of fig 1) being scanned, see (col.3, lines 30-35); said imaging device (imaging device 28 of fig 1-4), including a photosensitive area, (R1, R2--G1, G2--B1, B2 of fig 2, col.3, lines 45-50), at least one horizontal output register (48a, 48b—of fig 2, see col.4, lines 23-30), a drain gate; said method comprising the step of: a sensing movement (sensor 32 of fig 1, for detecting the movement of the film 12 of fig 1) for sensing movement of the object being scanned and generating a sync signal in correspondence with a movement of the object (film 12 of fig 1); generating a drain clock signals (clock generator circuit 42 of fig 1) for



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controlling the dumping of charge; timing the duration of the drain clock signal and the beginning of the output clock signal to the occurrence of the sync signal, see (col.3, lines 60-68) whereby the line readout time is dynamically adjusted to changes in velocity of the scanned object during a period when charge is being dumped, see (col.7, lines 5-10).

Sharman et al. does not teach or disclose an imaging device having an overflow drain.

Juen in the same area of imaging device having an improved exposure control and reduction apparatus teaches an imaging device (as shown in fig 1 and 2), having an overflow drain (a photometry (OFD) amplifier 4 of fig 1, for measuring a photo current flowing into an overflow drain a CCD imaging device, see abstract)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of Sharman to include: an imaging device having an overflow drain.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Sharman by the teaching of Juen for the purpose of controlling a proper exposure for obtaining a perfect final image, of all the prints of different color to be exactly superimpose, as discussed in col.2, lines 20-30, of Juen.

With respect to claim 12, Sharman et al. discloses the arrangement (as shown in fig 1-4) wherein the beginning of the output clock signal is delayed to accommodate a

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slower velocity in the movement of the scanned object (the movement of film 12 of fig 1, see col.7, lines 5-10).

With respect to claim 13, Sharman et al. discloses the arrangement (as shown in fig 1-4) wherein the duration of the drain clock signal (clock signal is generated by sensor 42 of fig 1) is extended to accommodate a slower velocity in the movement of the scanned object, (the movement of film 12 of fig 1, see col.7, lines 5-10).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 571-272-7472. The examiner can normally be reached on 9am-6pm.

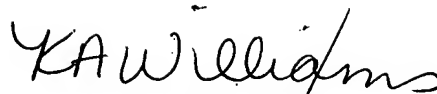
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 571-273-8300. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Negussie Worku  
Patent Examiner  
Art unit 2626  
July 8, 2005



**KIMBERLY WILLIAMS**  
**SUPERVISORY PATENT EXAMINER**